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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/654,956 | 09/05/2003 | Perry Philp | 213-043/HRH | 7920 |
| 1059 | 7590 | 01/11/2006 | EXAMINER | |
| BERESKIN AND PARR 40 KING STREET WEST BOX 401 TORONTO, ON M5H 3Y2 CANADA | | | MATZEK, MATTHEW D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1771 | |

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/654,956 | Applicant(s) PHILP ET AL. | |
| | Examiner Matthew D. Matzek | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 35-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/3/05, 12/17/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 13-34, in the reply filed on 10/19/2005 is acknowledged. Claims 1-12 and 35-43 have been withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-16, 19-24, 26-28 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuppin et al. (US 6,004,891) in view of Gray et al. (US 2004/0185734 A1).
 - a. Tuppin et al. teach a composite fabric comprising a load-carrying grid 3 disposed between cloth 2 and a flexible layer 4 (Figure 1). The load-carrying grid is at least made up of a warp 33 and a weft thread 31 (Abstract, Figure 1). The flexible layer and cloth may be held together with adhesive (col. 3, lines 52-55). The Examiner takes the position that as the flexible and cloth layers are held together by adhesive they would also necessarily be affixed to the load-carrying grid via adhesive as well. The invention of Tuppin et al. is silent as to the use of spreader yarns.
 - b. Gray et al. teach a fabric substrate for use in reinforcing laminated and coated fabrics (Abstract). In the first embodiment of the invention the fabric substrate is made by a weft insertion method and the warp and weft yarns are tied or knitted together by a third yarn [0009]. Examiner equates the outside warp yarn of Figure 6 (furthest left vertical yarn) to the instantly claimed spreader yarn, the remaining vertical yarns

constitute warp yarns and the remaining yarns **12** are equated to the instantly claimed weft yarns (Figure 6). The illustration of Figure 6 is to show only part of the fabric substrate. The other side is a mirror image with the same loops **24**.

c. Since Tuppin et al. and Gray et al. are from the same field of endeavor (i.e. reinforcement fabrics), the purpose disclosed by Gray et al. would have been recognized in the pertinent art of Tuppin et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the composite of Tuppin et al. with the reinforcement fabric of Gray et al. The skilled artisan would have been motivated to create an article comprising a reinforcement fabric that is less likely to tear away from itself along its edges due to the loops [0034, Gray et al.].

e. Claim 20 is rejected as the warp yarns are adjacent (on either side) to the weft yarns (Figure 6, Gray et al.). Claim 22 is rejected as the spreader yarns are parallel to the warp threads (Gray et al.) and the warp threads of Tuppin et al. extend in the longitudinal direction.

f. Claims 19, 21, 31 and 33 are rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the reinforcing fabric of Gray et al. with a plurality of warp yarns between the weft yarns. The skilled artisan would have been motivated by the desire to create a reinforcing fabric would improve the structural integrity of the fabric by having the warp yarn located between the weft yarns.

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g. Claim 34 is rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have laterally offset the first substrate from the second substrate of Tuppín et al. The skilled artisan would have been motivated by the desire to selectively impart reinforcement to one substrate over a second or use the excess fabric for bonding/attachment to another substrate.

3. Claims 13-16, 19-24, 26-28 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185732 A1) in view of Tuppín et al. (US 6,004,891). The inventions of Gray et al. and Tuppín et al. have been previously disclosed. The disclosure of Gray et al. is silent as to being adhesively fixed between two substrates.

a. Since Gray and Tuppín et al. from the same field of endeavor (i.e. reinforcement fabrics), the purpose disclosed by Tuppín et al. would have been recognized in the pertinent art of Gray et al.

h. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have adhesively bonded two substrates to the reinforcement fabric of Gray et al. The skilled artisan would have been motivated to create an article comprising a reinforcement fabric that is less likely to tear away from itself along its edges due to the loops [0034, Gray et al.].

i. Claim 20 is rejected as the warp yarns are adjacent (on either side) to the weft yarns (Figure 6, Gray et al.). Claim 22 is rejected as the spreader yarns are parallel to the warp threads (Gray et al.) and the warp threads of Tuppín et al. extend in the longitudinal direction.

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Claims 19, 21, 31 and 33 are rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the reinforcing fabric of Gray et al. with a plurality of warp yarns between the weft yarns. The skilled artisan would have been motivated by the desire to create a reinforcing fabric would improve the structural integrity of the fabric by having the warp yarn located between the weft yarns.

4. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185734 A1) in view of Tuppin et al. (US 6,004,891) as applied to claim 24 above, and further in view of Waters (US 6,158,477). The inventions of Gray et al. and Tuppin et al. are silent as to the use of a reinforcing wire.

a. Waters teaches a flexible duct comprising a reinforcing scrim **16** and a wire resilient helix (reinforcing wire) **14** (Figure 3). The scrim provides the duct with high tensile strength and excellent tear resistance in all directions. The wire and scrim are sandwiched between the inner and outer walls of the flexible duct (Abstract). The resilient helix provides the duct with rigidity, while allowing it to flex about several points (col. 1, lines 25-30).

b. Since Waters and Gray et al. are from the same field of endeavor (i.e. fabric-reinforced articles), the purpose disclosed by Waters would have been recognized in the pertinent art of Gray et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcing fabric of Gray et al. with the reinforcing wire of Waters. The skilled artisan would have been motivated by the desire to provide

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the reinforcing fabric with rigidity, while allowing it to flex about several points (col. 1, lines 25-30, Waters).

5. Claims 17, 18, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185734 A1) in view of Tuppin et al. (US 6,004,891) as applied to claims 13 and 24 above, and further in view of de Meyer (EP 0425099 A2). The inventions of Tuppin et al. and Gray et al. are silent as to the use of weft yarns at 45 degrees to the spreader yarns.

a. De Meyer et al. teach a fabric reinforced product comprising a mesh fabric **8**, longitudinal filaments (weft) **10, 11**, and carrier threads (warp) **14** (Abstract and Figure 2). The de Meyer et al. invention may be formed by inserting the mesh fabric between two layers of extrudable matrix (col.4, lines 15-20). In general, it is preferred that the meshes defined by sides making an angle of 40° to 80° and preferably 45° to 65° with the longitudinal direction of the fabric (col. 6, lines 5-9).

b. Since Gray et al. and de Meyer et al. are from the same field of endeavor (i.e. fabric-reinforced products), the purpose disclosed by de Meyer et al. would have been recognized in the pertinent art of Gray et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the weft yarns extend at an angle of at least 45° to the spreader (longitudinal) yarns. The skilled artisan would have been motivated by the desire to create a reinforcing fabric that provides lateral as well as torsional support.

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Conclusion


The German publication provided by Applicant has not been considered as no translation or English abstract have been provided.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm *mdm*


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